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ABSTRACT

Developed by a statewide committee of educators in the field of mathematics, this framework is designed to serve as a basic tool for curriculum development and implementation in Tennessee high schools. Each local school system is required to implement this framework beginning with the 1988-89 school year. The document contains goals and terminal objectives which are organized within the various strands for each subject taught. The goals identify what should be accomplished in each subject and the terminal objectives define the expectations within each strand. Goals and objectives are provided for the following subjects: (1) Arithmetic Grade 9; (2) Applied Mathematics I; (3) Applied Mathematics II; (4) Pre-Algebra; (5) Algebra I; (6) Algebra II; (7) Unified Geometry; (8) Trigonometry; (9) Advanced Mathematics Survey; (10) Calculus; (11) Advanced Algebra; (12) Analytical Geometry; and (13) Probability and Statistics. Included is a rationale statement, a list of the overall goals for teaching mathematics in Tennessee, and the Tennessee Secondary Mathematics Course sequences. (TW)

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MATHEMATICS

CURRICULUM FRAMEWORK

GRADES 9 ---12

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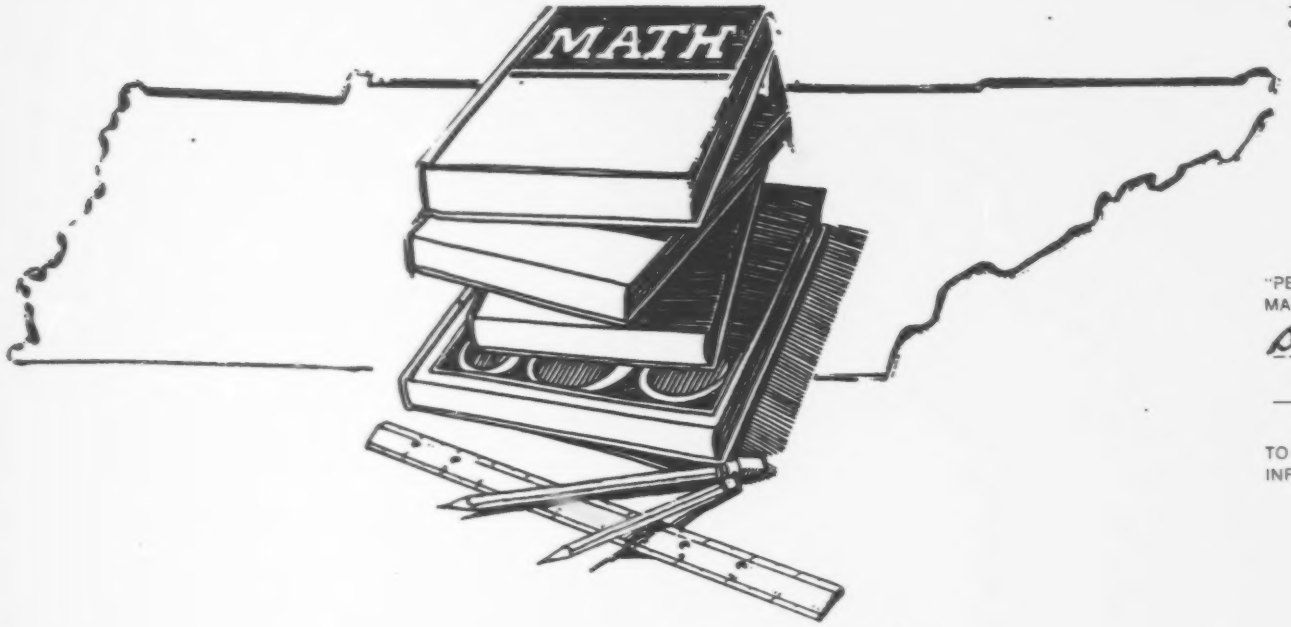

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MATHEMATICS
CURRICULUM FRAMEWORK

STATE OF TENNESSEE

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PREFACE

The Mathematics Framework was developed by a statewide committee of educators in the mathematics field in accordance with Rules, Regulations, and Minimum Standards of the State Board of Education, Section 0520-1-3.02. It is designed to serve as a basic for mathematics curriculum development and implementation, grades 9-12. Each local school system is required to implement this framework beginning with the 1988-89 school year.

The framework contains goals and terminal objectives which are organized within the various strands of mathematics for each subject. The goals identify what should be accomplished in each subject. The terminal objectives define the expectations within each srand.

Terminal objectives usually begin with "To Understand" which denotes not only the acquisition of knowledge, but also the practical application of knowledge. It implies a level of understanding appropriate to the students's grade in school. The objectives are intended to represent the minimum requirements of an effective mathematics curriculum.

The numbers preceding each terminal objective in 9-12 should be interpreted as follows:

Example: M013A.00

M = Mathematics
01 = Course (Arithmetic)
3 = Strand (Fractional Numbers)
A = Terminal Objective Number

The State Department of Education will make available to local school systems sufficient copies of the framework to facilitate the development of curriculum guides which identify specific objectives to be taught at each grade level. The framework should provide direction and add stability to the statewide program of mathematics.

RATIONALE

TO LEAD FULL LIVES AND TO PARTICIPATE WITH CONFIDENCE IN CONTEMPORARY AMERICAN SOCIETY, CITIZENS NEED AN UNDERSTANDING OF AND AN APPRECIATION FOR MATHEMATICS. MATHEMATICS PROVIDES THE STUDENT WITH THE ABILITY TO TRANSFORM AND TO COMMUNICATE QUANTITATIVE, LOGICAL AND SPATIAL INFORMATION.

GOALS OF MATHEMATICS
STATE OF TENNESSEE

1. To develop holistic thought processes necessary to identify and solve problems.

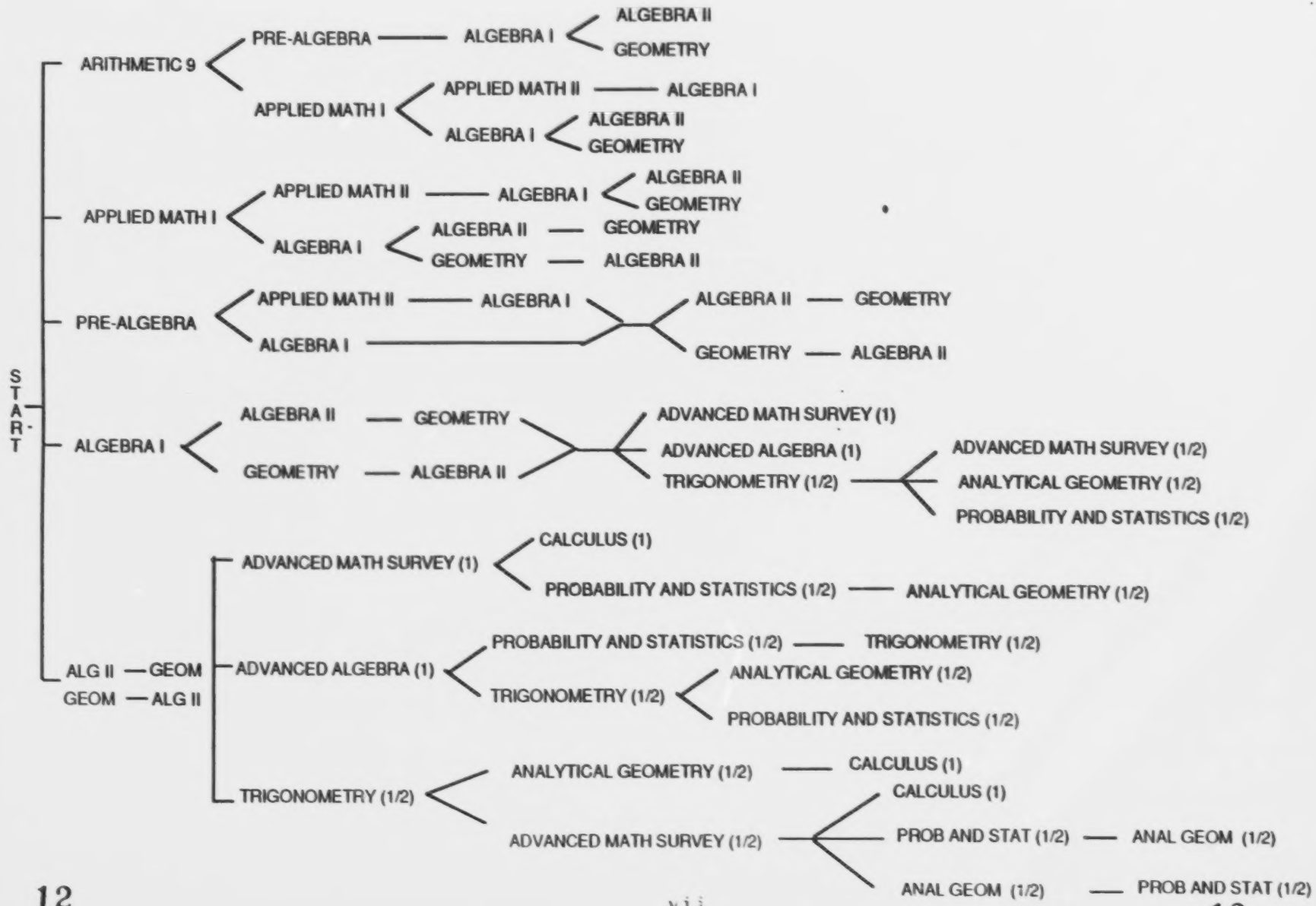
2. To develop an understanding of the significance and application of mathematics within all areas of human endeavor.

3. To develop an understanding of the capabilities of modern technology in the application of mathematics.

4. To develop an appreciation for the aesthetic nature of mathematics.

5. To master the skills and concepts necessry for mathematics literacy in a changing technological society.

TENNESSEE SECONDARY MATHEMATICS COURSE SEQUENCES



MATHEMATICS
CURRICULUM FRAMEWORK

GOALS AND OBJECTIVES

9 - 12

THE MATHEMATICS CURRICULUM IN GRADES NINE THROUGH TWELVE SHALL BE INCLUDE, BUT NOT NECESSARILY BE LIMITED TO, THE TERMINAL OBJECTIVES CONTAINED IN THIS SECTION.

THE TERMINAL OBJECTIVES LISTED SHALL BE INTRODUCED AND REINFORCED AS NECESSARY TO HELP STUDENTS ACHIEVE TO THEIR POTENTIAL.

MATHEMATICS - SECONDARY

COURSE: Arithmetic 9

GOAL: M0100.00 Understanding the basic concepts of arithmetic for application to daily living

PREREQUISITE: Recommended for students needing intensive work in the basic principles of arithmetic

CREDIT: 1

M0110.00 WHOLE NUMBERS	M0120.00 DECIMAL NUMBERS	M0130.00 FRACTIONAL NUMBERS	M0140.00 PERCENTS
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M011A.00 To understand whole numbers	M012A.00 To understand decimal numbers	M013A.00 To understand fractional numbers	M014A.00 To understand percent and percent equivalencies
M011B.00 To understand the operations of whole numbers	M012B.00 To understand the operations of decimal numbers	M013B.00 To understand the operations of fractional numbers	M014B.00 To understand the operations with percents

COURSE: Arithmetic 9

GOAL: M0100.00 Understanding the basic concepts of arithmetic for application to daily living

PREREQUISITE: Recommended for students needing intensive work in the basic principles of arithmetic

CREDIT: 1

M0150.00 MEASUREMENT	M0160.00 GEOMETRY	M0170.00 STATISTICS	
TERMINAL OBJECTIVES M015A.00 To understand basic customary units of measurement M015B.00 To understand basic metric units of measurement	**TERMINAL OBJECTIVES** M016A.00 To understand computing the perimeter of geometrical figures M016B.00 To understand computing the area of geometrical figures	**TERMINAL OBJECTIVES** M017A.00 To understand measures of central tendency M017B.00 To understand statistical graphs	

COURSE: Applied Mathematics I

GOAL: M0200.00 Understanding the applications and interrelationships of mathematics

PREREQUISITE: Student proficient in basic skills and/or teacher recommendation

CREDIT: 1

M0210.00 REAL NUMBERS	M0220.00 MEASUREMENT	M0230.00 PROBABILITY AND STATISTICS	M0240.00 RATIO, PROPORTION AND PERCENT
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M021A.00 To understand the application of whole numbers	M022A.00 To understand the application of SI metric instruments and units of measurement	M023A.00 To understand the development and application of tables and charts	M024A.00 To understand the application of ratios
M021B.00 To understand the application of fractional numbers	M022B.00 To understand the application of customary instruments and units of measurement	M023B.00 To understand the development and application of graphs	M024B.00 To understand the application of proportions
M021C.00 To understand the application of decimal numbers		M023C.00 To understand the application of probability	M024C.00 To understand the application of percents
M021D.00 To understand the application of integers		M023D.00 To understand the application of measures of central tendency	
M021E.00 To understand the application of positive exponents			

COURSE: Applied Mathematics I

GOAL: M0200.00 Understanding the applications and interrelationships of mathematics

PREREQUISITE: Student proficient in basic skills and/or teacher recommendation

CREDIT: 1

M0250.00 ALGEBRA	M0260.00 COORDINATE GRAPHING	M0270.00 GEOMETRY	
TERMINAL OBJECTIVES M025A.00 To understand the application of expressions M025B.00 To understand the application of algebraic properties and the order of operations M025C.00 To understand the application of equations M025D.00 To understand the application of formulas	**TERMINAL OBJECTIVES** M026A.00 To understand the application of ordered pairs M026B.00 To understand the application of graphing equivalent ratios	**TERMINAL OBJECTIVES** M027A.00 To understand the application of perimeter and circumference M027B.00 To understand the application of area M027C.00 To understand the application of surface area	

COURSE: Applied Mathematics II

GOAL: M0300.00 Understanding the applications and interrelationships of mathematics

PREREQUISITE: Student proficient in basic skills and/or teacher recommendation

CREDIT: 1

M0310.00 REAL NUMBERS	M0320.00 MEASUREMENT	M0330.00 GRAPHS AND STATISTICAL MEASUREMENT	M0340.00 ALGEBRA
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M031A.00 To understand the application of integers and irrational numbers	M032A.00 To understand the application of precision instruments and measurement	M033A.00 To understand the development, application and interpretation of technical bar graphs	M034A.00 To understand the application of formulas
M031B.00 To understand the application of scientific notation	M032B.00 To understand the application of conversions between SI metric and customary units of measure	M033B.00 To understand the development, application and interpretation of technical line graphs	M034B.00 To understand the application of inequalities
	M032C.00 To understand the application of angular and derived units of measure	M033C.00 To understand the development, application and interpretation of technical circle graphs	M034C.00 To understand the application of systems of two equations
	M032D.00 To understand the application of maps	M033D.00 To understand the development, application and interpretation of technical statistical measurement	M034D.00 To understand the application of factoring by inspection
	M032E.00 To understand the application of scale drawings		

MATHEMATICS - SECONDARY

COURSE: Applied Mathematics II

GOAL: M0300.00 Understanding the applications and interrelationships of mathematics

PREREQUISITE: Student proficient in basic skills and/or teacher recommendation

CREDIT: 1

M0350.00 COORDINATE GRAPHING	M0360.00 GEOMETRY	M0370.00 TRIGONOMETRY	
TERMINAL OBJECTIVES M035A.00 To understand the application of graphing linear equations M035B.00 To understand the application of graphing systems of two equations	**TERMINAL OBJECTIVES** M036A.00 To understand the application of volume formulas M036B.00 To understand the application of basic geometric constructions	**TERMINAL OBJECTIVES** M037A.00 To understand the application of the Pythagorean Theorem M037B.00 To understand the application of basic trigonometric functions	

MATHEMATICS - SECONDARY

COURSE: Pre-Algebra

GOAL: M0400.00 Understanding the concepts and properties of mathematics preliminary to algebra

PREREQUISITES: Student proficient in basic skills and/or teacher recommendation

CREDIT: 1

M0410.00 NUMBER PROPERTIES AND EXPRESSIONS	M0420.00 REAL NUMBERS AND NUMBER THEORY	M0430.00 EQUATIONS AND INEQUALITIES	M0440.00 RATIOS, PROPORTION AND PERCENT
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M041A.00 To understand algebraic expressions and the order of operations	M042A.00 To understand integers	M043A.00 To understand solving one-step equations	M044A.00 To understand ratios
M041B.00 To understand the properties of operations	M042B.00 To understand rational numbers	M043B.00 To understand solving two-step equations	M044B.00 To understand proportions
M041C.00 To understand the properties of equality and inequality	M042C.00 To understand rules of divisibility, factors and multiples	M043C.00 To understand solving one-step inequalities	M044C.00 To understand percents
	M042D.00 To understand exponents and square roots	M043D.00 To understand solving two-step inequalities	

MATHEMATICS - SECONDARY

COURSE: Pre-Algebra

GOAL: M0400.00 Understanding the concepts and properties of mathematics preliminary to algebra

PREREQUISITE: Student proficient in basic skills and/or teacher recommendation

CREDIT: 1

M0450.00 PROBABILITY AND STATISTICS	M0460.00 GEOMETRY	M0470.00 COORDINATE GRAPHING	
TERMINAL OBJECTIVES M045A.00 To understand measures of central tendency M045B.00 To understand statistical graphs M045C.00 To understand probability	**TERMINAL OBJECTIVES** M046A.00 To understand perimeter, circumference and area of polygons and circles M046B.00 To understand surface area and volume of solid figures	**TERMINAL OBJECTIVES** M047A.00 To understand graphing linear equations M047B.00 To understand graphing inequalities	

MATHEMATICS - SECONDARY

COURSE: Algebra I

GOAL: M0500.00 Understanding the language, notation and application of algebraic skills

PREREQUISITE: Teacher recommendation

CREDIT: 1

M0510.00 PROPERTIES AND TERMINOLOGY	M0520.00 LINEAR FUNCTIONS AND INEQUALITIES	M0530.00 EXPONENTS AND RADICALS	M0540.00 POLYNOMIALS
TERMINAL OBJECTIVES M051A.00 To understand the language of algebra M051B.00 To understand the properties of operations	**TERMINAL OBJECTIVES** M052A.00 To understand basic algebraic relations and functions M052B.00 To understand graphing linear functions and inequalities M052C.00 To understand solving systems of linear functions in two variables	**TERMINAL OBJECTIVES** M053A.00 To understand exponents M053B.00 To understand evaluation of square roots M053C.00 To understand radicals	**TERMINAL OBJECTIVES** M054A.00 To understand terms associated with polynomials M054B.00 To understand operations on polynomials

MATHEMATICS - SECONDARY

COURSE: Algebra I

GOAL: M0500.00 Understanding the language, notation and application of algebraic skills

PREREQUISITE: Teacher recommendation

CREDIT: 1

M0550.00 FACTORING	M0560.00 RATIONAL EXPRESSIONS	M0570.00 QUADRATIC FUNCTIONS	
TERMINAL OBJECTIVES M055A.00 To understand factoring of polynomials with a common factor M055B.00 To understand factoring over the set of real numbers	**TERMINAL OBJECTIVES** M056A.00 To understand simplifying rational expressions M056B.00 To understand operations on rational expressions	**TERMINAL OBJECTIVES** M057A.00 To understand quadratic functions and their graphs M057B.00 To understand the solutions and uses of quadratic functions	

MATHEMATICS - SECONDARY

COURSE: Algebra II

GOAL: M0600.00 Understanding the language, notation and application of algebraic skills

PREREQUISITE: Algebra I

CREDIT: 1

M0610.00 NUMBER SYSTEMS	M0620.00 RELATIONS AND FUNCTIONS	M0630.00 EXPONENTS AND RADICALS	M0640.00 POLYNOMIAL FUNCTIONS
TERMINAL OBJECTIVES M061A.00 To understand the real number system M061B.00 To understand the complex number system	**TERMINAL OBJECTIVES** M062A.00 To understand algebraic relations and functions M062B.00 To understand linear equations and equations with absolute values M062C.00 To understand linear inequalities in one variable M062D.00 To understand graphing relations and functions	**TERMINAL OBJECTIVES** M063A.00 To understand the properties and applications of exponents M063B.00 To understand the relationship of radicals and exponents	**TERMINAL OBJECTIVES** M064A.00 To understand the applications of theorems to polynomial functions M064B.00 To understand the nature of roots of polynomial functions

COURSE: Algebra II

GOAL: M0600.00 Understanding the language, notation, and application of algebraic skills

PREREQUISITE: Algebra I

CREDIT: 1

M0650.00 QUADRATIC RELATIONS	M0660.00 SYSTEMS OF EQUATIONS	M0670.00 RATIONAL EXPRESSIONS INVOLVING POLYNOMIALS OF HIGHER DEGREE	M0680.00 PROBABILITY AND STATISTICS
TERMINAL OBJECTIVES M065A.00 To understand quadratic equations inequalities M065B.00 To understand the applications of the discriminant and sum and product of roots M065C.00 To understand conic sections	**TERMINAL OBJECTIVES** M066A.00 To understand systems of linear equations in two variables M066B.00 To understand systems of linear equations in three variables	**TERMINAL OBJECTIVES** M067A.00 To understand operations on rational expressions involving polynomials of higher degree M067B.00 To understand the solution of equations containing rational expressions	**TERMINAL OBJECTIVES** M068A.00 To understand the fundamental principle of counting, permutations and combinations M068B.00 To understand simple probabilities M068C.00 To understand the organization and representation of data M068D.00 To understand the application of formulas to data M068E.00 To understand predictions

MATHEMATICS - SECONDARY

COURSE: Unified Geometry

GOAL: M0700.00 Understanding the properties, relationships and geometric reasoning concerning 1-, 2- and 3-dimensional figures

PREREQUISITE: Algebra I

CREDIT: 1

M0710.00 ELEMENTS OF GEOMETRY	M0720.00 LINES AND PLANES	M0730.00 POLYGONS AND POLYHEDRA	M0740.00 CONGRUENCY
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M071A.00 To understand the structure of an axiomatic system	M072A.00 To understand the relationships of lines and planes to space	M073A.00 To understand the properties of polygons	M074A.00 To understand congruent polygons
M071B.00 To understand the application of set concepts to points, lines and planes	M072B.00 To understand angles and their measure	M073B.00 To understand prisms and pyramids	M074B.00 To understand congruent triangles
M071C.00 To understand the relation between numbers and points	M072C.00 To understand perpendicularity		
	M072D.00 To understand parallelism		
	M072E.00 To understand transformations		

COURSE: Unified Geometry

GOAL: M0700.00 Understanding the properties, relationships and geometric reasoning concerning 1-, 2- and 3-dimensional geometric figures

PREREQUISITE: Algebra I

CREDIT: 1

M0750.00 SIMILARITY	M0760.00 CIRCLE, CONES, CYLINDERS AND SPHERES	M0770.00 FORMAL PROOFS	M0780.00 COORDINATE GEOMETRY
TERMINAL OBJECTIVES M075A.00 To understand similar polygons M751B.00 To understand applications of similarity	**TERMINAL OBJECTIVES** M076A.00 To understand circles M076B.00 To understand spheres M076C.00 To understand cylinders and cones	**TERMINAL OBJECTIVES** M077A.00 To understand conditional statements M077B.00 To understand inductive and deductive reasoning M077C.00 To understand writing proofs M077D.00 To understand formal proofs	**TERMINAL OBJECTIVES** M078A.00 To understand the coordinate plane M078B.00 To understand the application of coordinate geometry

COURSE: Trigonometry

GOAL: M0800.00 Understanding the periodic nature of trigonometric functions

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1/2

M0810.00 CIRCULAR FUNCTIONS	M0820.00 IDENTITIES AND EQUATIONS	M0830.00 APPLICATIONS OF CIRCULAR FUNCTIONS	M0840.00 VECTORS, POLAR COORDINATES AND COMPLEX NUMBERS
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M081A.00 To understand the sine and cosine functions	M082A.00 To understand methods of verifying trigonometric identities	M083A.00 To understand solutions of triangles	M084A.00 To understand vectors
M081B.00 To understand the tangent, cotangent, secant and cosecant functions	M082B.00 To understand sum and difference identities	M083B.00 To understand additional applications of trigonometric functions	M084B.00 To understand polar coordinates
M081C.00 To understand the inverse circular functions	M082C.00 To understand double-angle and half-angle identities		M084C.00 To understand the relationship between polar coordinates and complex numbers
	M082D.00 To understand solving trigonometric equations		

MATHEMATICS - SECONDARY

COURSE: Advanced Mathematics Survey

GOAL: M0900.00 Understanding applications, interrelationships and terminology of mathematics

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1/2

M0910.00 ANALYTICAL GEOMETRY	M0920.00 SEQUENCES AND SERIES	M0930.00 FUNCTIONS	
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	
M091A.00 To understand conic sections	M092A.00 To understand arithmetic sequences and series	M093A.00 To understand composition of functions	
M091B.00 To understand polynomial functions	M092B.00 To understand geometric sequences and series	M093B.00 To understand inverses of functions	
M091C.00 To understand limits and continuity of polynomial functions	M092C.00 To understand mathematical induction	M093C.00 To understand exponential and logarithmic functions	

MATHEMATICS - SECONDARY

COURSE: Advanced Mathematics Survey

GOAL: M1000.00 Understanding applications, interrelationships and terminology of mathematics

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1

M1010.00 TRIGONOMETRY	M1020.00 ANALYTICAL GEOMETRY	M1030.00 SEQUENCES AND SERIES	M1040.00 FUNCTIONS
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M101A.00 To understand circular functions	M102A.00 To understand conic sections	M103A.00 To understand arithmetic sequences and series	M104A.00 To understand composition of functions
M101B.00 To understand equations and identities	M102B.00 To understand vectors	M103B.00 To understand geometric sequences and series	M104B.00 To understand inverses of functions
M101C.00 To understand the applications of trigonometry	M102C.00 To understand rational functions	M103C.00 To understand mathematical induction	M104C.00 To understand exponential and logarithmic equations
M101D.00 To understand polar coordinates and complex numbers	M102D.00 To understand limits and continuity of polynomial functions		

COURSE: Calculus

GOAL: M1100.00 Understanding the calculus and its applications

PREREQUISITES: Advanced Mathematics (1) or Trigonometry and Analytic Geometry

CREDIT: 1

M1110.00 THE LIMIT	M1120.00 DEFINITION OF THE DERIVATIVE	M1130.00 DEFINITION OF THE INTEGRAL	M1140.00 DIFFERENTIATION
TERMINAL OBJECTIVES M111A.00 To understand the properties and theorems on limits M111B.00 To understand the continuity of a function at a point	**TERMINAL OBJECTIVES** M112A.00 To understand the limit definition of the derivative M112B.00 To understand the relationship between differentiability and continuity	**TERMINAL OBJECTIVES** M113A.00 To understand approximation techniques M113B.00 To understand the integral as the limit of a sum	**TERMINAL OBJECTIVES** M114A.00 To understand the differentiation of algebraic functions M0114B.00 To understand the differentiation of transcendental functions M0114C.00 To understand the differentiation of composite functions

MATHEMATICS - SECONDARY

COURSE: Calculus

GOAL: M1100.00 Understanding the calculus and its applications

PREREQUISITES: Advanced Mathematics (1) or Trigonometry and Analytic Geometry

CREDIT: 1

M1150.00 APPLICATION OF DIFFERENTIATION	M1160.00 INTEGRATION	M1170.00 APPLICATION OF INTEGRATION	
TERMINAL OBJECTIVES M115A.00 To understand the concept of a derivative as slope M115B.00 To understand the use of the derivative to locate extrema M115C.00 To understand the derivative as a rate of change	**TERMINAL OBJECTIVES** M116A.00 To understand the concept of integration as antidifferentiation M116B.00 To understand definite integrals M116C.00 To understand the techniques of integration	**TERMINAL OBJECTIVES** M117A.00 To understand the application of the integral in computing geometric measure M117B.00 To understand additional applications of the integral	

MATHEMATICS - SECONDARY

COURSE: Advanced Algebra

GOAL: M1200.00 Understanding interrelationships of various fields of mathematics

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1

M1210.00 RELATIONS AND FUNCTIONS	M1220.00 MATRIX ALGEBRA	M1230.00 SEQUENCES AND SERIES	M1240.00 PROBABILITY AND STATISTICS
TERMINAL OBJECTIVES M121A.00 To understand the functional concept M121B.00 To understand the relationship between functions and their inverse relations	**TERMINAL OBJECTIVES** M122A.00 To understand matrices M122B.00 To understand determinants	**TERMINAL OBJECTIVES** M123A.00 To understand sequences M123B.00 To understand series	**TERMINAL OBJECTIVES** M124A.00 To understand the determination of probability M124B.00 To understand the rules of probability M124C.00 To understand measures of central tendency

MATHEMATICS - SECONDARY

COURSE: Advanced Algebra

GOAL: M1200.00 Understanding interrelationships of various fields of mathematics

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1

M1250.00 ANALYTIC GEOMETRY	M1260.00 RIGHT TRIANGLE TRIGONOMETRY	M1270.00 ALGORITHMIC REASONING	
TERMINAL OBJECTIVES M125A.00 To understand the algebraic description of conics M125B.00 To understand the geometric description of conics	**TERMINAL OBJECTIVES** M126A.00 To understand the basic trigonometric functions M126B.00 To understand solving right triangles M126C.00 To understand solving oblique triangles	**TERMINAL OBJECTIVES** M127A.00 To understand types of logical reasoning M127B.00 To understand the need of logical structures for computer interface	

MATHEMATICS - SECONDARY

COURSE: Analytical Geometry

GOAL: M1300.00 Understanding coordinate systems and the relationship between geometric and algebraic concepts

PREREQUISITE: Trigonometry

CREDIT: 1/2

M1310.00 LINES	M1320.00 CONICS	M1330.00 CURVE SKETCHING	M1340.00 VECTORS
TERMINAL OBJECTIVES M131A.00 To understand the algebraic description of lines M131B.00 To understand the geometric description of lines M131C.00 To understand the relationship between algebraic and geometric descriptions	**TERMINAL OBJECTIVES** M132A.00 To understand the algebraic description of conics M132B.00 To understand the geometric description of conics M132C.00 To understand the relationship betweeen algebraic and geometric descriptions	**TERMINAL OBJECTIVES** M133A.00 To understand algebraic characteristics of polynomial and rational functions M133B.00 To understand geometric properties of polynomial and rational functions	**TERMINAL OBJECTIVES** M134A.00 To understand the algebra of vectors M134B.00 To understand the geometry of vectors

MATHEMATICS - SECONDARY

COURSE: Analytical Geometry

GOAL: M1400.00 Understanding coordinate systems and the relationship between geometric and algebraic concepts

PREREQUISITE: Trigonometry

CREDIT: 1

M1410.00 LINES	M1420.00 CONICS	M1430.00 CURVE SKETCHING	M1440.00 VECTORS	M1450.00 THREE-DIMENSIONAL VECTOR SPACE
TERMINAL OBJECTIVES M141A.00 To understand the algebraic description of lines M141B.00 To understand the geometric description of lines M141C.00 To understand the relationship between algebraic and geometric descriptions	**TERMINAL OBJECTIVES** M142A.00 To understand the algebraic description of conics M142B.00 To understand the geometric description of conics M142C.00 To understand the relationship between algebraic and geometric description	**TERMINAL OBJECTIVES** M143A.00 To understand algebraic characteristics of polynomial and rational functions M143B.00 To understand geometric properties of polynomial and rational functions M143C.00 To understand graphing on a polar coordinate system	**TERMINAL OBJECTIVES** M144A.00 To understand the algebra of vectors M144B.00 To understand the geometry of vectors	**TERMINAL OBJECTIVES** M145A.00 To understand three-dimensional coordinate systems M145B.00 To understand graphing in three dimensions

COURSE: Probability and Statistics

GOAL: M1500.00 Understanding statistical techniques and concepts of probability

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1/2

M1510.00 DATA ANALYSIS	M1520.00 DATA INTERPRETATION	M1530.00 SYSTEMATIC COUNTING	M1540.00 PROBABILITY
TERMINAL OBJECTIVES	TERMINAL OBJECTIVES	TERMINAL OBJECTIVES	TERMINAL OBJECTIVES
M151A.00 To understand data analysis	M152A.00 To understand measures of central tendency	M153A.00 To understand sample spaces	M154A.00 To understand the types of probability
M151B.00 To understand classifications of data	M152B.00 To understand variability	M153B.00 To understand combinatorics	M154B.00 To understand the properties of probability
M151C.00 To understand graphical analysis of data			

MATHEMATICS - SECONDARY

COURSE: Probability and Statistics

GOAL: M1600.00 Understanding statistical techniques and concepts of probability

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1

M1610.00 DATA ANALYSIS	M1620.00 DATA INTERPRETATION	M1630.00 SYSTEMATIC COUNTIN6	M1640.00 PROBABILITY
TERMINAL OBJECTIVES	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**	**TERMINAL OBJECTIVES**
M161A.00 To understand data collection	M162A.00 To understand measures of central tendency	M163A.00 To understand sample spaces	M164A.00 To understand the types of probability
M161B.00 To understand classifications of data	M162B.00 To understand variability	M163B.00 To understand combinatorics	M164B.00 To understand the properties of probability
M161C.00 To understand graphical analysis of data			

COURSE: Probability and Statistics

GOAL: M1600.00 Understanding statistical techniques and concepts of probability

PREREQUISITES: Algebra I, Algebra II, Unified Geometry

CREDIT: 1

M1650.00 SAMPLING DISTRIBUTION	M1660.00 STATISTICAL INFERENCE		
TERMINAL OBJECTIVES M165A.00 To understand the types of distributions M165B.00 To understand the characteristics of the normal curve	**TERMINAL OBJECTIVES** M166A.00 To understand correlation M166B.00 To understand regression M166C.00 To understand estimation in statistical inference M166D.00 To understand hypothesis testing M166E.00 To understand the design of a statistical study		